

[54] **HAND-WRITABLE POLYMER DISPERSED LIQUID CRYSTAL BOARD SET WITH HIGH RESISTANCE LAYER OF CROSSLINKING POLYMER ADJACENT CONDUCTIVE LAYER**

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[57] **ABSTRACT**

A liquid crystal display device of externally charging type, including a screen from the outside of which display and erasing operations can be repeatedly performed simply, and having an excellent memory retention performance of the recorded image and durability. Also, a hand-writable liquid crystal board set being excellent in operativity, performances, safety, including the above liquid crystal display device as a liquid crystal board. The liquid crystal display device includes a layered structure comprising, in the following order: a conductive layer; a transparent high-electric resistance layer having a volume resistivity of  $10^{13} \Omega \cdot \text{cm}$  or more in a 20° C. air at a relative humidity of 90%; a liquid crystal-dispersed polymer layer which has a volume resistivity of  $10^{13} \Omega \cdot \text{cm}$  or more in a 20° C. air at a relative humidity of 90%; and a transparent insulator layer. The hand-writable liquid crystal board set comprises:

- (A) a board of the above liquid crystal display device,
- (B) display means for displaying recording images onto the board surface, and erasing means for erasing the recorded images; and
- (C) a power source for generating a surface potential between the surface of the liquid crystal board and the conductive layer by the display means;

wherein the display means employs a writing member electrically connected to one terminal of the power source which is connected at the other terminal to the conductive layer; and the erasing means employs an erasing member electrically connected to the conductive layer.

**40 Claims, 4 Drawing Sheets**

